Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	3	(tilted adj (implantation or implanting)) same line	US-PGPUB; USPAT	OR	OFF	2004/12/09 13:52
L2	60	(tilted adj (implantation or implanting))	US-PGPUB; USPAT	OR	OFF	2004/12/09 13:40
L3	8	(tilted adj (implantation or implanting))	USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/09 13:22
L4	20	(angled adj (implantation or implanting))	USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/09 13:23
L5	242	(angled adj (implantation or implanting))	US-PGPUB; USPAT	OR	OFF	2004/12/09 13:24
L6	230	5 and @ad<"20030714"	US-PGPUB; USPAT	OR	OFF	2004/12/09 13:53
L7	184	((sloped or inclined) near3 (implantation or implanting))	US-PGPUB; USPAT	OR	OFF	2004/12/09 13:44
L8	172	7 and @ad<"20030714"	US-PGPUB; USPAT	OR	OFF	2004/12/09 13:40
L9	108	((sloped or inclined) near3 (implantation or implanting))	USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/09 13:44
L10	606	(oblique near3 (implantation or implanting))	US-PGPUB; USPAT	OR	OFF	2004/12/09 14:11
L11	561	10 and @ad<"20030714"	US-PGPUB; USPAT	OR	OFF	2004/12/09 13:53
L12	255	(oblique near3 (implantation or implanting))	USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/09 14:18
L13	1455	(photoresist with transparent)	USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/09 14:19
L14	10	(photoresist with transparent with (implantation or implanting))	USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/09 14:19
L15	13	(photoresist with transparent with (implantation or implanting))	US-PGPUB; USPAT	OR	OFF	2004/12/09 14:21
L16	13	(photoresist with (pass adj through) with (implantation or implanting))	US-PGPUB; USPAT	OR	OFF	2004/12/09 14:24

L17	4	(photoresist with (passing adj through) with (implantation or implanting))	US-PGPUB; USPAT	OR	OFF	2004/12/09 14:24

US-PAT-NO: 5675167

DOCUMENT-IDENTIFIER: US 5675167 A

TITLE: Enhancement-type semiconductor having reduced leakage current

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Detailed Description Text - DETX (13):

That is to say, ion implantation which is caused to pass through the gate electrode 13 and the gate oxide film is performed in a region not covered by the photoresist 16, forming the high-concentration P-type region 17, and so the threshold can be caused to be shifted with stability. Along with this, the shift amount of the threshold can easily be increased merely by varying the ion-implantation amount, even in a case where the high-concentration P-type region is formed only in the proximity of the source side by causing passage through the gate electrode. This can solve an extremely difficult pointing a case where ion implantation is performed with the gate electrode as a mask and the high-concentration P-type region is formed by thermal diffusion.

PAT-NO: JP408162424A

DOCUMENT-IDENTIFIER: JP 08162424 A

TITLE: MANUFACTURE OF SEMICONDUCTOR DEVICE

PUBN-DATE: June 21, 1996

INVENTOR-INFORMATION:
NAME
OOKA, YOSUKE

INT-CL (IPC): H01L021/265

ABSTRACT:

PURPOSE: To provide a manufacturing method capable of manufacturing a semiconductor device in which a plurality of impurity diffusion regions different in impurity concentration are formed, by using a small number of processes as compared with the conventional method.

CONSTITUTION: Photoresist is not left on a high impurity concentration ion implanted region 34 turning to a region whose impurity concentration is the highest out of N-wells. On the middle impurity concentration ion implantated region 36 whose impurity concentration is the second highest, the photoresist is patterned in the manner in which the pattern width W is 1μm, the height H is 1μm, and the pattern interval L1 is 2μm. On the lowest impurity concentration ion implanted region 38, the photoresist is patterned in the manner in which the pattern width W is 0.5μm, the height H is 1μm, and the pattern interval L2 is 1μm. While an Si substrate 30 is rotated, oblique ion implantation of P<SP>+</SP> is so performed that an angle 45° is kept to the surface of the Si substrate 30.

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Abstract Text - FPAR (2):

CONSTITUTION: Photoresist is not left on a high impurity concentration ion implanted region 34 turning to a region whose impurity concentration is the highest out of N-wells. On the middle impurity concentration ion implantated region 36 whose impurity concentration is the second highest, the photoresist is patterned in the manner in which the pattern width W is 1μm, the height H is 1μm, and the pattern interval L1 is 2μm. On the lowest impurity concentration ion implanted region 38, the photoresist is patterned in the manner in which the pattern width W is 0.5μm, the height H is 1μm, and the pattern interval L2 is 1μm. While an Si substrate 30 is rotated, oblique ion implantation of P<SP>+</SP> is so performed that an angle 45° is kept to the surface of the Si substrate 30.

US-PAT-NO: 6451621

DOCUMENT-IDENTIFIER: US 6451621 B1

TITLE: Using scatterometry to measure resist thickness and control implant

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Application Filing Date - AD (1):
20020116

Brief Summary Text - BSTX (7):
Optionally, however, the dopants can bombard the substrate at an angle of incidence that is not perpendicular, as illustrated in FIG. 1. Such angled implantation has a number of applications. One application is providing diffused sources and drains. Another application, illustrated in FIG. 1, is providing narrowly spaced P-N junctions. As illustrated in FIG. 1, angled implants can be used to provide periodically spaced n-doped regions 12 in a p-doped substrate 10, for example. The n-doped regions 12 are provided by implants at two mirror image angles, and one of the angles is illustrated by the arrows in FIG. 1. As can be seen in FIG. 1, there are two n-doped regions 12 for each gap in the patterned resist 14. Thus, angled implants can provide periodic n-doped regions having half the smallest period achievable by the lithographic process used to pattern the resist 14.

Brief Summary Text - BSTX (8):
The size and spacing of the n-doped regions 12 within the substrate 10 depends on the thickness and gap width of the resist 14 in addition to the angle of implantation. Variability in the resist 14 can cause the n-doped regions 12 to form improperly. For example, FIG. 2 illustrates the result of an angled implant with a patterned resist 24 that is approximately

25% thinner than the resist 14 of FIG. 1. In FIG. 2, adjacent n-doped regions 22 are essentially unseparated for the same angled implantation. FIG. 3 illustrates the result of an angled implant with a patterned resist 34 that is approximately 25% greater that the resist 14 of FIG. 1. In FIG. 3, approximately none of the dopant reaches substrate 30 for the same angled implantation, and n-doped regions do not form. Variation in resist thickness between the extremes of FIGS. 2 and 3 can thus result in non-functionality or non-uniform functionality for devices relying on angled implants.